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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/827,398	04/19/2004	Peter T. Aylward	85184LMB	3106

7590 06/30/2005

Paul A. Leipold, Patent Legal Staff,
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343 State Street
Rochester, NY 14650-2201

EXAMINER

WALKE, AMANDA C

ART UNIT	PAPER NUMBER
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1752

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/827,398

Applicant(s)

AYLWARD ET AL.

Examiner

Amanda C. Walke

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Campbell (5,612,283) in view of Dalvey et al (6,753,050 or 6,884,311).

Campbell discloses a dye-receiving element for thermal dye transfer comprising a support having on the front side thereof, in order, a biaxially-oriented composite film laminated thereto and a dye image-receiving layer, the composite film comprising a microvoided thermoplastic core layer and at least one substantially void-free thermoplastic surface layer, the support having on the back side thereof a biaxially-oriented transparent film laminated thereto which has a light transmission of at least 70%, the ratio of thickness of the transparent film to the composite film being from about 0.45 to about 0.75. Due to their relatively low cost and good appearance, composite films are generally used and referred to in the trade as "packaging films." The low specific gravity of microvoided packaging films (preferably between 0.3-0.7 g/cm.^{sup.3}) produces dye-receivers that are very conformable and results in low mottle-index

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values of thermal prints. These microvoided packaging films also are very insulating and produce dye-receiver prints of high dye density at low energy levels. The nonvoided skin produces receivers of high gloss and helps to promote good contact between the dye-receiving layer and the dye-donor film. This also enhances print uniformity and efficient dye transfer. In products made by a typical extrusion lamination process, back printing labels, water marks and logos are applied directly to the back side of the paper support stock with inks applied by a gravure printing process. It would be desirable to have such "back printing" indicia be visible, however, the reference is not specific as to the method of printing the indicia.

Dalvey et al disclose an image transfer sheet comprises a release layer and a polymer layer. One or more of the release layer and the polymer layer comprise titanium oxide or other white pigment. One embodiment of the present invention includes a method for transferring an image to a colored substrate. The method comprises providing an image transfer sheet comprising a release layer and an image-imparting layer that comprises a polymer. The image-imparting layer comprises titanium oxide or another white pigment or luminescent pigment. The image transfer sheet is contacted to the colored substrate. Heat is applied to the image transfer sheet so that an image is transferred from the image transfer sheet to the colored substrate. The image transferred comprises a substantially white or luminescent background and indicia. Another embodiment of the present invention includes an image transfer sheet. The image transfer sheet comprises a polymer. The polymer comprises titanium oxide or other white pigment or luminescent pigment. One other embodiment of the present invention includes a method for making an image transfer sheet. The method comprises providing an ink receptive polymer and impregnating the polymer with titanium oxide or other white pigment or

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luminescent pigment. An image is imparted to the polymer. With the method of the present invention, a sheet such as is shown at 104a, is prepared having a substrate layer 302 that comprises a polymeric material such as polypropylene, paper, a polyester film, or other film or films having a matte or glossy finish, such as is shown in FIG. 3a. The substrate layer 302 may be coated with clay on one side or both sides. The substrate layer may be resin coated or may be free of coating if the substrate is smooth enough. The resin coating acts as a release coating 306. The coating weight typically ranges from 40 g/square meter to 250 g/square meter. In one embodiment, the range is 60 to 130 g/square meter. In one embodiment, overlaying the substrate 302 or base paper is a silicon coating 304. Other release coatings such as fluorocarbon, urethane, or acrylic base polymer are usable in the image transfer device of the present invention. One other release coating is a silicone coating. The silicone coating has a release value of about 10 to 2500 g/inch, using a Tesa Tape 7375 tmi, 90 degree angle, 1 inch tape, 12 inches per minute. These other release coatings are, for some embodiments, impregnated with titanium oxide or other white pigments in a concentration of about 20% by weight. In other embodiments of the image transfer sheet, a changeable color was added to one or more of the layers of the image transfer sheet. The color-changeable material transferred utilized a material such as a temperature sensitive pigmented chemical or light changeable material, a neon light which glows in the dark for over 50 hours and was a phosphorescent pigment, a zinc-oxide pigment or a light-sensitive colorant. A concentrated batch of one or more of the materials of polyethylene, polyester, EVA, EAA, polystyrene, polyamide or MEAA which was a Nuclel-like material was prepared. The color-changeable material was added to the layer material up to a concentration of 100% by weight with 50% by weight being typical. The color-changeable material technologies

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changed the image transfer sheet from colorless to one or more of yellow, orange, red, rose, red, violet, magenta, black, brown, mustard, taupe, green or blue. The color-changeable material changed the image transfer sheet color from yellow to green or from pink to purple. In particular, sunlight or UV light induced the color change.

Given the teachings of the references, it would have been obvious to one of ordinary skill in the art to prepare the material of Campbell choosing to employ the improved method of forming an indicia taught by Dalvey et al with reasonable expectation of achieving a support having good light transmission.

Conclusion

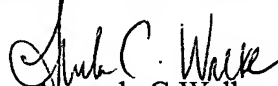
4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Dalvey et al (6,551,692), Fitzer et al (4,737,224 and 4,542,078), Matsumoto et al (5,480,702), and Chang (6,476,842) are cited for their teachings of similar materials.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amanda C. Walkè whose telephone number is 571-272-1337. The examiner can normally be reached on M-R 5:30-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Amanda C Walke
Examiner
Art Unit 1752

ACW
June 23, 2005